

Work Order ID 78614

78614

Page 1

January-11-12 2:48:30 PM

Item ID: D2360 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Litter Tie Down Assembly
 Start Date: 11/01/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 25/01/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: M.L.J Date: 12/01/11 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2341	Rev F
D2360	Rev D

100	BAND SAW	0.00							
100									
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	Cut blanks: 12.65" Long								

110	HAAS CNC VERTICAL MACHINING #1	0.00							
110									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	Machine as per Folio D2341 and Dwg D2341 2-Deburr								

ork 12/02/14 4 0

JL 12-02-14 5 PTO

W/O: 78614		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2360 PAR #: Fault Category: machining NCR: Yes ☒ No ☐ DQA: Date: 12/2/27
 Resolution: use as is Disposition: use as is QA: N/C Closed: ☒ Date: 12/2/27

NCR: 17-1229		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12-02-14	110	Dimension Z.B is 2.675 on one part.	<u>GP</u> 12.02.14 <u>DS/DM</u>	Acceptable. Holes in correct location	<u>JK</u> 12-02-14	<u> </u> 12/02/15	<u>GP</u> 12.02.14 <u>DS/DM</u>	

NOTE: Date & initial all entries

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Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00		SL 12-02-14		5	10		
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		ant 12/02/15		5			
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							5x4m2 12/02/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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 Start Date: 11/01/2012 Start Qty: 4.00 ***4*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<u>W</u>	<u>12</u>	<u>02</u>	<u>22</u> (5)
190 *190* Packaging Packaging	Identify as per dwg & Stock Location <u>225</u> Memo	0.00 0.00							<u>12/2/22</u> SP (5)
200 *200* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							<u>12/2/23</u> (5)

12-02-23
(5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-11-12 2:48:33 PM

Page 1

Work Order ID: 78614

78614

Parent Item: D2360

D2360

Parent Item Name: Litter Tie Down Assembly

Start Date: 11/01/2012

Required Date: 25/01/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP rev H 07.06.12 ecn 825 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6201		Manufactured	No			100	f	22.7400	1.054	4.437895			

D6201

**

12-02-10

"T" Extrusion

Location	Loc Qty	Loc Code
MAT004	10.74	
57767	1.34	
71208	9.4	
MAT28	12	
77491	12	

x 4.437

AN526C1032R18

Purchased

No

170

Each

669.0000

1

4

AN526C1032R18

**

Screw

Location	Loc Qty	Loc Code
FP002	93	
4523	93	
ST348	576	
101458	57	
108079	419	
110099	100	

5

AN960JD10

NAS1149D0363J Purchased

No

170

Each

0.0000

2

8

AN960.ID10 40 M119537

**

Washer

AN960JD10L

NAS1149D0332J Purchased

No

170

Each

0.0000

8

32

AN960.ID10I 40 M118384

**

Washer

M119717 (10K) (22K)

EPB/12/12/22

EPB/12/12/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Page 2

Work Order ID: 78614

78614

Parent Item: D2360

D2360

Parent Item Name: Litter Tie Down Assembly

Start Date: 11/01/2012

Required Date: 25/01/2012

Start Qty: 4.00

Required Qty: 4.00

D2002-015

Manufactured No

170

Each

23.0000

2

8

D2002-015

Knob

**

Location

Loc Qty

Loc Code

Mezz

23

16177

23

D2345

Manufactured No

170

Each

23.0000

1

4

D2345

Lock Channel

**

Location

Loc Qty

Loc Code

ST011

23

70800

23

D2366

Manufactured No

170

Each

35.0000

2

8

D2366

Lock Handle

**

Location

Loc Qty

Loc Code

ST008

35

66512

5

73333

30

D2367

Manufactured No

170

Each

15.0000

1

4

D2367

Handle Knob

**

Location

Loc Qty

Loc Code

ST008

15

68883

15

D2372

Manufactured No

170

Each

0.0000

2

8

D2372

Quick Release

**

B8274 (2x)
B8510 (8x)

January-11-12 2:48:34 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Page 3

Work Order ID: 78614

78614

Parent Item: D2360

D2360

Parent Item Name: Litter Tie Down Assembly

Start Date: 11/01/2012

Required Date: 25/01/2012

Start Qty: 4.00

Required Qty: 4.00

D2373 Manufactured No

170 Each 15.0000 1 4

D2373

Spring

**

Location

Loc Qty

Loc Code

ST008

15

66118

15

D2444 Manufactured No

170 Each 13.0000 1 4

D2444

Pip Pin Assembly

**

Location

Loc Qty

Loc Code

GA

6

77689

6

ST014

7

72147

7

MS20470AD3-4 Purchased No

170 Each 8,906.000 1 4

MS20470AD3-4

Rivet, Universal Head

**

Location

Loc Qty

Loc Code

ST319

8906

111477

8332

15541

574

GP 12/02/12

GP 12/02/12

380000 (32)

GP 12/02/12

5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 4

Work Order ID: 78614

78614

Parent Item: D2360

D2360

Parent Item Name: Litter Tie Down Assembly

Start Date: 11/01/2012

Required Date: 25/01/2012

Start Qty: 4.00

Required Qty: 4.00

MS21042L3

Purchased

No

170

Each

6,081.000

3

12

MS21042L3

Nut

**

12/02/22

Location

Loc Qty

Loc Code

ST300

6081

117441

16

117885

32

118451

5

118927

3

119017

5551

119075

474

MS27039-1-13

Purchased

No

170

Each

125.0000

1

4

MS27039-1-13

Screw

**

15
12/02/22

Location

Loc Qty

Loc Code

ST291

125

110844

25

119736

100

MS27039-1-15

Purchased

No

170

Each

121.0000

2

8

MS27039-1-15

Screw

**

10
12/02/22

Location

Loc Qty

Loc Code

ST291

121

118093

22

118574

2

119736

97

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

Page 5

January-11-12 2:48:34 PM

Work Order ID: 78614

78614

Parent Item: D2360

D2360

Parent Item Name: Litter Tie Down Assembly

Start Date: 11/01/2012

Required Date: 25/01/2012

Start Qty: 4.00

Required Qty: 4.00

NAS679A3W

Purchased

No

170

Each

213.0000

I

4

NAS679A3W

Nut

Location

Loc Qty

Loc Code

Mezz

213

1463

20

2409

193

Handwritten signature and date: 12/02/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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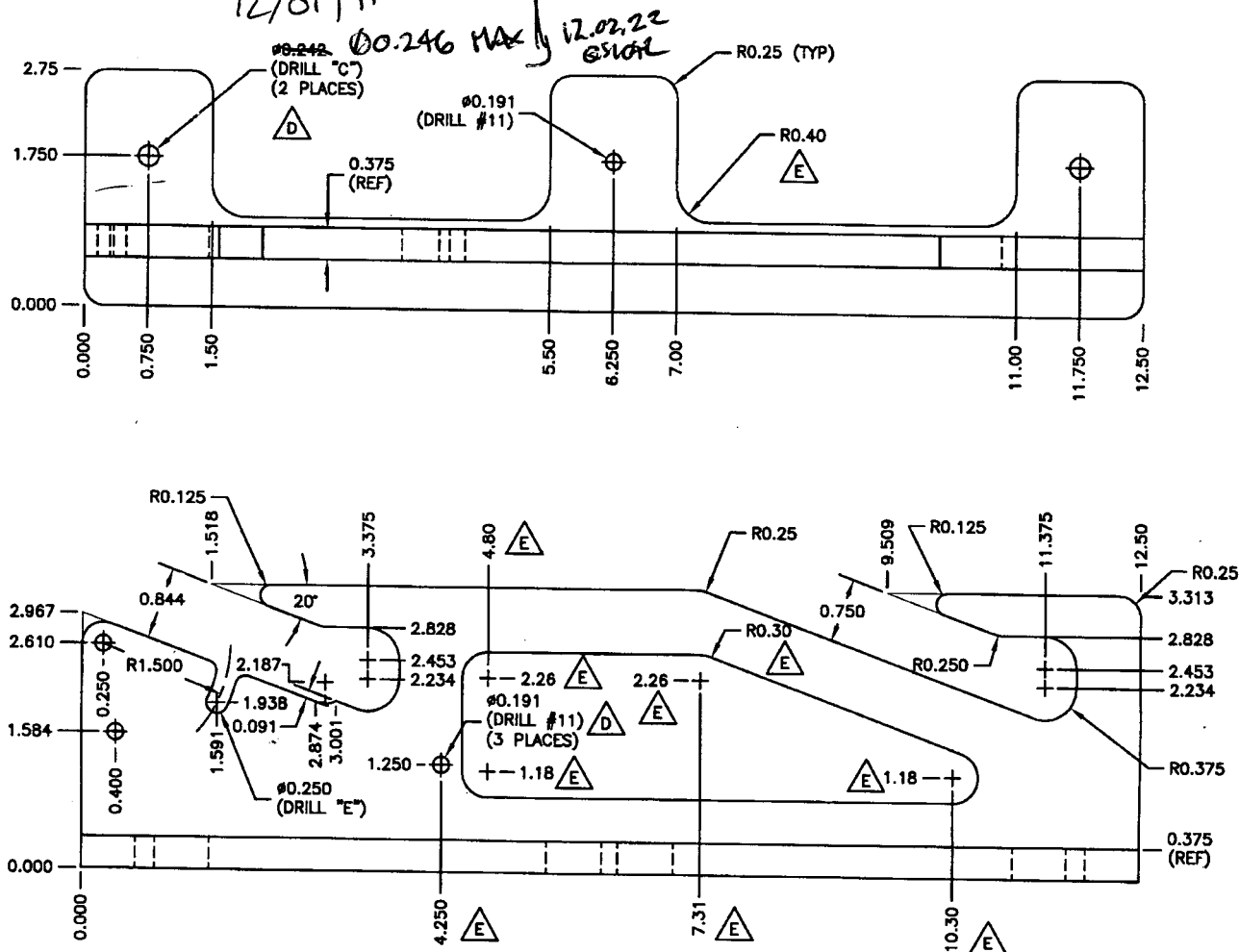
NOTE: Date & initial all entries

DART

DESIGN BW	DRAWN BY JC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED B	APPROVED H	DRAWING NO. D2341	REV. F SHEET 1 OF 1
DATE 07.06.07		TITLE LITTER TIE DOWN BRACKET (LOCKING)	SCALE 1:2
A	95.01.13	NEW ISSUE	
B	95.02.14	MODIFIED LOCK	
D	95.02.20	CHANGES TO DIAMETERS	
E	97.10.01	CHANGES FOR MACHINING	
F	07.06.07	REVISED NOTES; FINISH WAS ANODIZE	

SHOP COPY
RETURN TO
FURNISH
UNCONTROLLED COPY
SUBJECT TO
WITH DART
WORK CENTER

NO. 78614 M.L.J
12/01/11

**D2341 LITTER TIE DOWN BRACKET (LOCKING)**

- 1) MATERIAL: MAKE FROM D6201-0125 EXTRUSION (6061-T6/T651 PER QQ-A-200/8)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (REF. 4.3.5.1) PER QSI 005 4.3
- 3) BREAK ALL SHARP EDGES TO 0.005 TO 0.010
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N "D2341" USING FINE POINT PERMANENT INK MARKER

**RELEASED**

07-6-22

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	78614
Description: Litter Tie Down Bracket (Locking)		Part Number:	D2341
Inspection Dwg: D2341	Rev: F	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.750	+/-0.010	1.748	/		VERIN J1-3	
2.75	+/-0.030	2.752	/			
Ø0.242	+0.005/-0.001	.242	/			
Ø0.191	+0.005/-0.001	.191	/			
R0.25	+/-0.030	.25	/		R-G	
R0.40	+/-0.030	.40	/		R-G	
12.50	+/-0.030	12.50	/		M-Tape	
11.750	+/-0.010	11.749	/		VERIN CMC-02	
11.00	+/-0.030	10.998	/		H-G	
7.00	+/-0.030	7.004	/		VERIN CMC-02	
6.250	+/-0.010	6.250	/			
5.50	+/-0.030	5.50	/		H-G	
1.50	+/-0.030	1.503	/		VERIN J1-3	
0.750	+/-0.010	.750	/			
0.400	+/-0.010	.399	/			
1.584	+/-0.010	1.582	/			
2.610	+/-0.010	2.610	/			
0.250	+/-0.010	.250	/			
0.844	+/-0.010	.843	/			
Ø0.250	+/-0.010	.250	/			
0.750	+/-0.010	.752	/			
3.313	+/-0.010	3.314	/			
4.250	+/-0.010	4.250	/			
1.250	+/-0.010	1.250	/			

Measured by:	JL	Audited by:	cmf	Prototype Approval:	N/A
Date:	12-02-14	Date:	12/02/15	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.05.24	New Issue P/O D2360	KJ/JLM	
B	07.07.17	Dwg Rev. updated	KJ/JLM	
C	10.02.02	Dimensions updated	KJ	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART**RELEASED**

97-06-07

DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED HA	DRAWING NO. D2360	REV. D SHEET 1 OF 2
DATE 07.06.06		TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS	
A	95.02.10	NEW ISSUE	
B	95.02.20	RE-DESIGN	
C	97.08.27	ADD MS20470AD3-4 RIVET	
D	07.06.06	D2002-015 WAS D2376; SECTION B-B QTY(2) AN960JD10 WAS QTY(3) QTY(8) AN960JD10L WAS QTY(5)	

PARTS LIST:

QTY	PART NUMBER	DESCRIPTION
X	D2360	LITTER TIE DOWN ASSEMBLY (LOCKING)
1	D2341	LITTER TIE DOWN (LOCKING)
1	D2345	LOCK CHANNEL
2	D2366	LOCK HANDLE
1	D2367	KNOB (DELRIN)
2	D2372	QUICK RELEASE FASTENERS
1	D2373	SPRING
2	D2002-015	KNOB (DELRIN)
1	D2444	PIP PIN
1	AN526C1032R18	SCREW
2	AN960JD10	WASHER
8	AN960JD10L	WASHER
1	MS20470AD3-4	RIVET
3	MS21042L3	NUT (OR MS21042-3)
1	MS27039-1-13	SCREW
2	MS27039-1-15	SCREW
1	NAS679A3W	NUT

SHOPL COPY
RETURNED
ENGINEERING
UNCONTROLLED
SUBJECT TO APPROVAL
WITHOUT SIGNATURE
WORK ORDER
NO 78-0-14

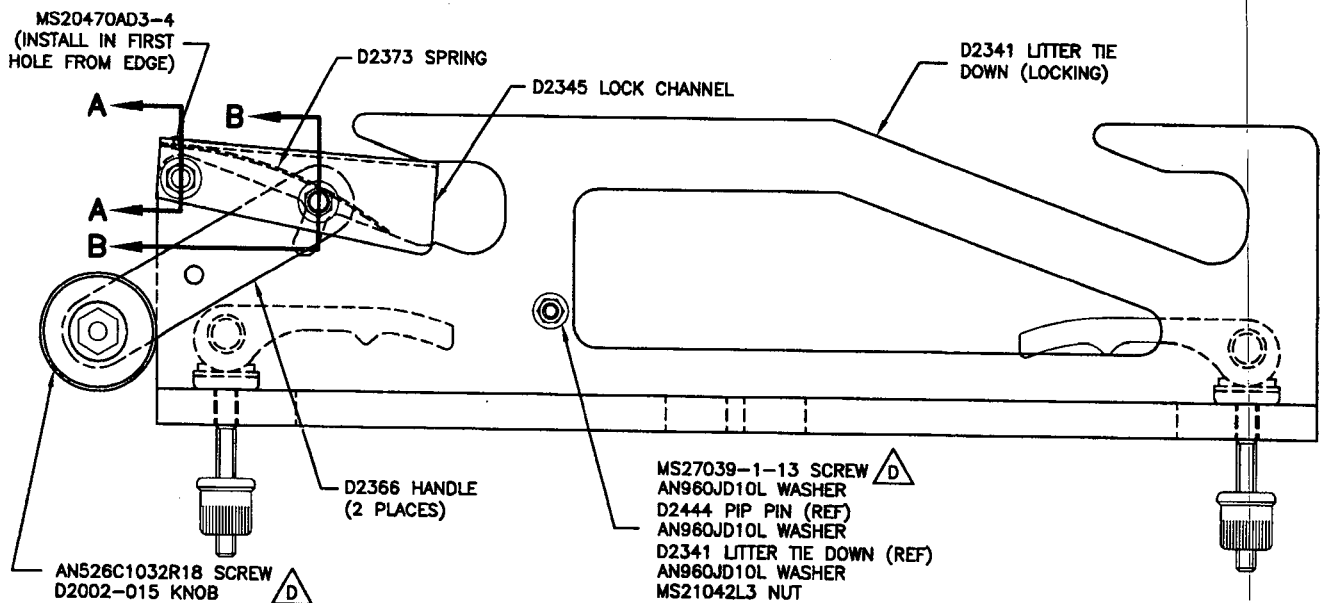
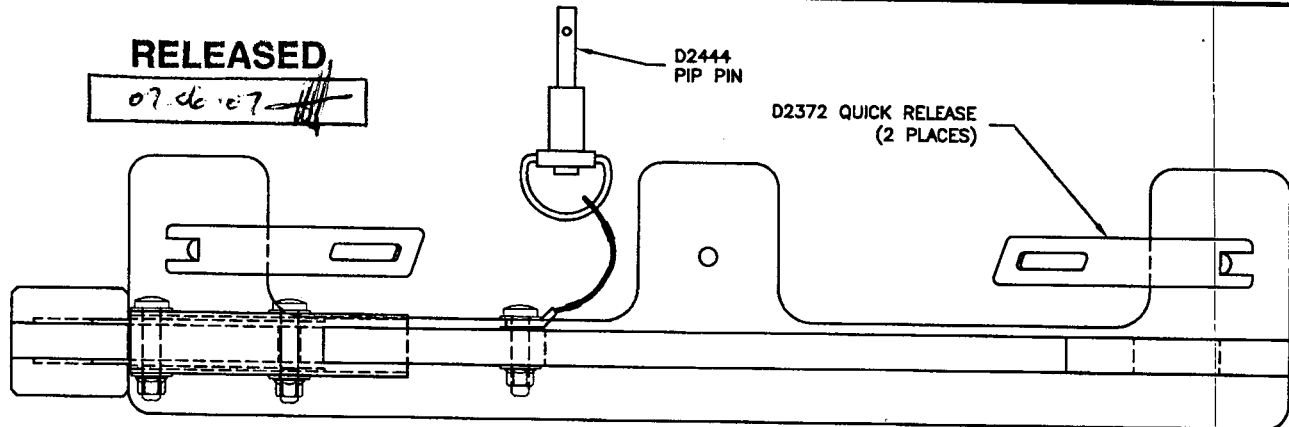
M.C.S
21/02/22

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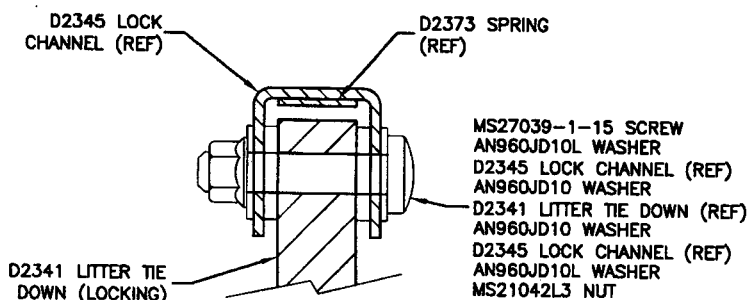
DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED #	DRAWING NO. D2360	REV. D SHEET 2 OF 2
DATE 07.06.06	TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS		SCALE



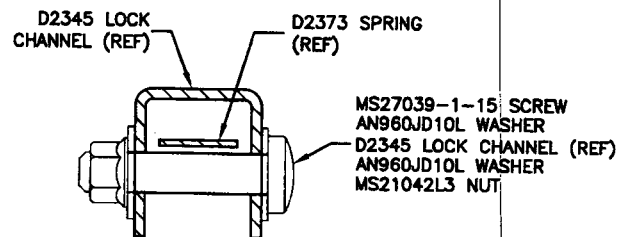
AN526C1032R18 SCREW
D2002-015 KNOB
D2366 HANDLE (REF)
D2367 KNOB
D2366 HANDLE (REF)
D2002-015 KNOB
AN960JD10L WASHER
NAS679A3W NUT

D2360 LITTER TIE DOWN ASSEMBLY (LOCKING)

7861Y



SECTION A-A
(SCALE 1:1)



SECTION B-B
(SCALE 1:1)

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